

machining variables HJ (e.g., maximum spindle load, the cutting speed of the cutting tool, and the spindle rotating speed) are changed in accordance with the type of machine. For example, the values of machining variables HJ may include the spindle rotating speed and the spindle load in lathes, the distance between electrodes and the voltage load in electric discharge machines, and the voltage load in laser cutting machines. Furthermore, the parameters mentioned above may be judged with respect to a referenced spindle load limit value in lathes and a voltage load limit value in electric discharge machines and laser cutting machines. The contents of the navigation information that appears on the display may also be changed in accordance with the machine.

IN THE CLAIMS:

Please amend the following claims:

1. (Amended) An apparatus for aiding a machinist in preparing a programmed machine for a machining process, wherein a basic program for performing the machining process is generated based on machining information input from the machinist and tool information stored in a tool data memory, the apparatus comprising:

a computer for executing the basic program to obtain values of various machining variables;

an analyzing means for analyzing the variable values obtained during the execution of the basic program to determine the efficiency of the machining process; and

a notifying means for notifying the machinist an advisory message regarding how to improve the basic program to generate a final machining program that enables the machining process to perform at the highest speed allowed by the capacity of the machine,

wherein the advisory message is selected based on the analysis performed by the analyzing means and the final machining program is generated by improving the basic program according to the advisory message.

4. (Amended) The apparatus according to claim 1, further comprising a navigation information memory for storing a plurality of messages, wherein the notifying means selects a message from the navigation information memory in accordance with the analysis performed by the analyzing means and notifies the machinist the selected message.

5. (Amended) The apparatus according to claim 1, wherein the machining process is one of a plurality of machining processes, wherein the basic program is executed to obtain the values of machining variables for the machining processes, wherein the apparatus comprises an input device for designating one of the machining processes, and wherein the analyzing means analyzes the machining variables of the designated machining process.

13. (Amended) An apparatus for aiding a machinist in preparing a programmed machine for a plurality of machining processes, wherein a basic program for performing the machining processes is generated based on machining information input from the machinist and tool information stored in a tool data memory, the apparatus comprising:
a computer for executing a machining simulation for simulating the machining processes according to the basic program to obtain values of various machining variables;
an input device for designating a certain machining process;
an analyzing means for analyzing the machining variables of the designated

machining process to determine the machining efficiency of the designated machining process;

a navigation information memory for storing a plurality of messages that provide advice to the machinist regarding how to enable each of the machining processes to achieve the highest speed allowed by the capacity of the machine; and

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a display means for selecting a message from the navigation information memory based on the analysis performed by the analyzing means and displaying the selected message so that a final machining program is generated by improving the basic program according to the selected message.

21. (Amended) A method for aiding a machinist in preparing a programmed machine for a machining process, wherein a basic program for performing the machining processes is generated based on machining information input from the machinist and tool information stored in a tool data memory, the method comprising:

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executing the basic program to obtain values of various machining variables; analyzing the current values of the machining variables obtained during the execution of the basic program to determine the efficiency of the machining process; and notifying the machinist an advisory message regarding how to improve the basic program to generate a final machining program that enables the machining process to perform at the highest speed allowed by the capacity of the machine based on the analysis performed by the analyzing so that the final machining program is generated by improving the basic program according to the advisory message.
